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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,131	03/19/2004	Bjoern Magnussen	ELLIP-007USB	3151
7663	7590	05/30/2006	EXAMINER	
STETINA BRUNDA GARRED & BRUCKER			DOUGHERTY, THOMAS M	
75 ENTERPRISE, SUITE 250				
ALISO VIEJO, CA 92656			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H/P

<b>Office Action Summary</b>	<b>Application No.</b> 10/805,131	<b>Applicant(s)</b> MAGNUSSEN ET AL.	
	<b>Examiner</b> Thomas M. Dougherty	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-38 is/are allowed.
- 6) ☒ Claim(s) 1-6, 12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 7-11 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) -           | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Maeno et al. (US 6,380,660). Maeno et al. show (figs. 1, 2) a drive system comprising at least one vibrating motor having at least one vibration generator (3) each as well as at least one resonator (201, 202) each and a device (401, 402) that is driven by the at least one motor, the resonator (201, 202) having a contact area that cooperates with a driven surface of the device (401, 402) to drive said device (401, 402) along a path with the path and driven surface extending along one of a straight or circular axis, at least one of the resonator (201, 202) contact area and the device (401, 402) surface having a surface profile (201c, 202c) configured to guide the device (401, 402) by having side surfaces located on opposing sides of the path to keep the device between the side surfaces and on the path.

The vibrating generator (3) is made of a piezoelectric material. See col. 6, line 13.

The device surface (of 401, 402) driven by the contact area (201c, 202c) has a profile comprising an indentation or protrusion. Note that the contact areas (201c, 202) are indented in a circular cut-out fashion.

The device (401, 402) surface driven by the contact area (201c, 202c) has a profile comprising an indentation produced by wear. Note that over time such would occur, particularly in the figure 2 embodiment where the 201c and 202c surfaces do not precisely match the shape of 401 and 402.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeno et al. (US 6,429,572) in view of Tamai et al. (US 5,760,529). Given the invention of Maeno et al. as noted above, over time, the contact area will be shaped by wear. The contact area comprises one of an indentation or a protrusion as noted above. They do not show the driven surface as being of a different hardness than the contact area.

Tamai et al. teach (see claim 1) the driven surface as being of a different hardness than the contact area. Note that on the driven surface an iron oxide film is formed that is different from the iron oxide film formed on the contact surface and each of the driven member and resonator may likewise be composed of different materials, see claims 3 onward. Note that these materials have different surface hardnesses. This is shown in Table 1. Note that formation of the oxide films depends on at least the temperature during use and the material of the components.

As each of the component materials, that of the resonator and that of the driven member may be different, the noted materials are configurable such that the contact area of the resonator can be made of a softer material than the driven surface. See again the material hardnesses in Table 1.

Tamai et al. do not show the claimed indentation and protrusion arrangement.

It would have been obvious to one having ordinary skill in the art to employ the design of Tamai et al. in the device of Maeno et al. at the time of that invention, such that the Maeno et al. device has a driven surface of a different hardness than a contact area in order to reduce wear as Tamai et al. note in their SUMMARY OF THE INVENTION.

Additionally, it would have been obvious to one having ordinary skill in the art to employ materials of different hardnesses in the device of Maeno et al. since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPA 416.

Claims 12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeno et al. (US 6,429,572) in view of Zumeris (US 5,877,579). Given the invention of Maeno et al. as noted above, they do not show the device comprising at least two motors that are arranged in the same orientation to drive the driven element in the same direction.

Zumeris shows (fig. 6) two motors that are arranged in the same orientation to drive the driven element (30) in the same direction.

Zumeris doesn't show a surface texture or surface profile configured to guide the device.

Zumeris teaches driving the motors in parallel in figures 6 and 9 for example. How the driven device moves, e.g. the number of directions is a method of driving the device which isn't further limiting to the claimed structure. Likewise, Maeno et al. and Zumeris do not disclose whether or not the motors are urged against the driven device with respective forces that differ from each other, or if the motors have different operating frequencies and amplitudes. These too are methods of driving the device. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham* 2 USPQ2d 1647 (1987).

It would have been obvious to one having ordinary skill in the art to employ two motors as Zumeris shows, in the device of Maeno et al. at the time of his invention, in order to allow a heavier load to be driven.

Additionally, it would have been obvious to one having ordinary skill in the art to use two motors in the same direction in the device of Maeno et al. at the time of his invention since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

***Allowable Subject Matter***

Claims 21-38 are allowed.

Claims 7-11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In addition to the previous reasons for allowance, claim 25 and those claims dependent on it are allowed and the following is an examiner's statement of reasons for allowance: the prior art fails to show a drive system comprising a vibrating motor with a vibration generator and resonator which is used to move a device and has a contact area that cooperates with a surface of the device wherein either the contact area on the resonator or the surface area on the driven element comprises a protrusion located along sides of the path of motion and extending into indentations formed in the other of the contacting area and driven surface an amount sufficient to guide the driven element relative to the resonator.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2834

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Direct inquiry to Examiner Dougherty at (571) 272-2022.

*tmd*  
tmd

May 22, 2006

*Thomas M. Dougherty*  
**TOM DOUGHERTY**  
**PRIMARY EXAMINER**